REMARKS

In view of the above amendments and following remarks, reconsideration of the rejections that are contained in the Office Action of July 7, 2009 is respectfully requested.

In view of the Office deciding to reopen prosecution in this application, Applicants have at this point decided to file a reply under 37 CFR 1.111.

Claim Amendments

As can be seen from the above, prior claims 16-36 have been canceled and replaced with new claims 37-56. Independent claim 37 corresponds to prior claim 16. However, Applicants have at this point, without acquiescing to the position taken by the Examiner, nonetheless decided to include the recitation of a carrier. Thus, claim 37 recites a carrier that has the at least one electrically contactable conductor surface arranged thereon and at least one current-equalizing conductor surface arranged thereon. Further, the at least one current-equalizing conductor surface, is recited as surrounding the at least one electrically contactable conductor surface on the carrier.

The word surrounding has been chosen as language corresponding directly to that used in the specification. It is understood quite clearly from the disclosure, and the embodiments that are illustrated, that having the current-equalizing conductor surface surround or enclose the electrically contactable conductor surface does not mean that it is entirely or completely surrounded. Such is clear, for example, from viewing surfaces 4, 4′ or 5 in Figs. 4, 6, 7 and 8. The surfaces clearly surround the electrically contactable conductor surface or surfaces but also clearly do not completely surround or enclose such.

The language of claim 37 has been similarly included in independent claims 53 and 56. Thus all of the independent claims that are now pending in the present application include similar language directed to the medical electrode of the present invention.

Claim Rejections Under 35 U.S.C. § 101

It is respectfully maintained that Applicants' arguments regarding the rejection under 35 U.S.C. § 101 are still correct with respect to the Examiner's rejection as set forth on pages 3 and 4 of the Office Action. The arguments as set forth on pages 5-11 are incorporated herein by

reference. It is nonetheless hope that the above amendments may help to resolve the Examiner's underlying concerns at this point.

In particular, all of the independent claims now recite that the electrically contactable conductor surface and the current-equalizing conductor surface are arranged on a carrier. Further, all of the independent claims further recite that the at least one current-equalizing conductor surface surrounds the at least one electrically contactable conductor surface on the carrier. While this language does not use the word "ring" as apparently required by the Examiner on page 3 of the Office Action, by reciting, as in the specification, that the current-equalizing conductor surface surrounds the electrically contactable conductor surface, the same point is essentially made. Accordingly, it is respectfully submitted and believed that the Examiner's rejection should be withdrawn, and that the Examiner's concerns have been fully addressed by the above claim amendments.

Rejections Under 35 U.S.C. § 112

For the reasons as discussed above, it is respectfully submitted that the Examiner's concern as raised at the middle of page 4 of the Office Action has been addressed. Thus, the rejection under 35 U.S.C. § 112, first paragraph is also, respectfully, submitted to have been overcome.

The Examiner further rejected the claims at the top of page 5 of the Office Action as being indefinite for using a negative limitation by reciting that the at least one current-equalizing conductor surface was "uncontacted." As a general proposition, however, it is submitted that negative limitations are often, including in this context, understood and definite. Nonetheless, to try to resolve the Examiner's concern regarding any possible confusion regarding this limitation, the at least one current-equalizing conductor surface as been recited as being free from connecting elements for connection to circuitry in order to remain electrically uncontacted on the carrier. Thus, it is similarly recited that it is free from connecting elements, the point being that this is to remain electrically uncontacted on the carrier.

Rejections Under 35 U.S.C. § 102

Claims 16-28, 30-32 were rejected by the Examiner as being anticipated by Canadian Patent 1,219,642. Further, claims 16-21, 23 and 36 were rejected as being anticipated by King,

U.S. Patent 4,282,886. Claim 29 was further rejected as being anticipated by or obvious from the Canadian patent. Claim 36 was further rejected as being unpatentable over the Canadian patent by itself. Claims 17 and 24-32 were further rejected as being unpatentable over King in view of the Canadian patent. Claims 33-35 were further rejected as being unpatentable over King by itself. However, the present invention clearly defines over all these references that have been cited by the Examiner.

Independent claim 37 requires that the at least one current-equalizing conductor surface is free from connecting elements for connection to circuitry in order to remain electrically uncontacted on the carrier. There is no such current-equalizing conductor surface in the Canadian patent, as the Canadian patent has a connecting element for each conductive element.

The Examiner makes reference to Fig. 3 of Frize, which includes electrode elements 30, 33 and 36. As described in Frize, each extends to a connector tab 32 by way of connector links 31, 35 and 38. Frize has no conductor surfaces free from connecting elements.

The Examiner takes the position that the elements are each capable of being contactable by an electrode or can be considered free of a contacting element depending upon the intended use. The Examiner notes that Applicants' circular rings are shown in their drawings as all being capable of being contacted by an electrical energy applicator. The Examiner thus designates which elements are contactable in terms of intended use in interpreting Applicants' claims. However, this position by the Examiner is contrary to law and must be reversed.

As described in the specification and reflected in independent claim 37, the point of the invention is that a medical electrode has at least one electrically contactable conductor surface that is provided with at least one uncontacted current-equalizing conductor surface for the purpose of equalizing the current provided to the contactable conductor surface. It is arranged at a spacing and is electrically separated from the at least one electrically contactable conductor surface. Further, it is free from connecting elements.

In the Canadian patent to Frize, as described beginning at line 5 of page 3, an electrode for connection to an electrosurgical generator comprises a plurality of separate conductive elements that are spaced apart in a surface plane and attached to a non-conductive backing. A connector is provided from each one of the conductive elements to a resistor having a resistance value that is proportional to the current flow through the one of the conductive elements is provided for uniform current distribution. As is appreciated from the general description of

Frize, as well as the drawings thereof, each conductor surface has a respective connecting element and corresponding resistor.

The Examiner cannot designate contacts of Frize as being free of a contacting element depending upon the intended use. The intended use for each of the conductor surfaces in Frize is to be connected with a connecting element, as illustrated, through a resistor, not unconnected. The Examiner's position appears to be saying that the Examiner is free to ignore structural features that Frize clearly provides. However, any such interpretation is impermissible.

Applicants' circular rings being capable of being contacted by an electrical energy applicator is irrelevant. The point is that they are not contacted, and are free of connecting elements, which is what is claimed.

Applicants provide an embodiment in Fig. 4, for example, in which there are two contactable conductor surfaces 3 and two uncontacted current-equalizing conductor surfaces 4 and 5 that are free from connecting elements. Are they somehow capable of being contacted by an electrical energy applicator if someone decided to contact them? That is an irrelevant point, because that is not what is being claimed. What is being claimed is that they are free from connecting elements, which the conductor surfaces of Frize are not. There is a reason they are free from connecting elements in the present invention, which is to use these conductor surfaces as current-equalizing conductor surfaces. Frize specifically wants the connection.

Simply stated, Frize doesn't have the claimed structure. It is legally insufficient to say that Frize could have the claimed stricture if you change the meaning of the claim language. The language in fact requires that the uncontacted connector be free from a connecting element. This is not a statement of intended use but a structural requirement.

The differences between the present invention and Frize are emphasized by the recitation of the current-equalizing conductor surfaces being free from connecting elements, while the contactable conductor surface has a connecting element. One of ordinary skill in the art clearly understands what is a connector element in the context of an electrode. The Examiner is not free to ignore structural features or a required absence of a structural feature, particularly when it directly relates to the purpose of the invention.

The Examiner's position with respect to anticipation of each of the independent claims is thus clearly improper, and the rejection must be withdrawn.

Claim 53 is a method of equalizing current in a medical electrode. The first step of this method is to provide a medical electrode that has at least one electrically contactable conductor surface that is provided with a connecting element and have at least one uncontacted conductor surface that is arranged at a spacing from the at least one electrically contactable connector surface and that is free from connecting elements. As was discussed above with respect to claim 37, Frize has no such uncontacted conductor surface that is free from connecting elements.

While Frize does connect circuitry to deliver or monitor energy from at least one electrically contactable conductor, Frize does not leave an uncontacted surface electrically unconnected to the circuitry. There is no such discussion in Frize and no indication from Frize that any conductor surface should be left uncontacted.

Claim 53 further requires that an energy transmission should be delivered to or received from the circuitry to the at least one electrically contactable conductor and that the at least one uncontacted conductor surface equalize the distribution of the current. There is no equalization of the distribution of the current using an uncontacted conductor surface in Frize. Rather, Frize uses resistors for this purpose.

Accordingly, it is respectfully submitted to be clear that Frize fails to provide all of the steps that are provided in method claim 53, and does not anticipate the claim. Reversal of this rejection is further requested.

The Examiner states that the method step would be inherent since the method does not require the uncontacted metal surface to remain unconnected to the electrical stimulator. However, claim 53 requires that the distribution of the current be equalized with the at least one uncontacted conductor surface. Further, claim 53 requires the step of leaving the uncontacted surface electrically unconnected to the circuitry. Thus, the Examiner's statement that the method does not require the uncontacted metal surface to remain unconnected is clearly incorrect. The claim in fact clearly states this. Further, the claim further requires the equalization of the distribution of the current using the uncontacted conductor surface, which does not take place in Frize. This is not an inherent feature of Frize, as current, to the extent that it is equalized in Frize, is equalized using the resistors.

Claim 56 requires a medical system that includes circuitry that is selected from the group consisting of circuitry that monitors biopotentials and circuitry that provides electrical energy to a patient. The medical system further requires a medical electrode including at least one energy

transmission conductor surface that has a connecting element that is electrically connected to the circuitry. Claim 56 further requires at least one current equalizing conductor surface that is not connected to the circuitry. The at least one current equalizing conductor surface is required to be spaced from the energy transmission conductor surface to provide improved current density distribution. These elements are not met by Frize.

In Frize, as discussed above, there are a plurality of conductor surfaces. However, all of the conductor surfaces are connected to circuitry in use. Note Fig. 2 for example. Thus, Frize provides no medical system in which a medical electrode has an energy transmission conductor that is electrically connected to the circuitry and a current equalizing conductor surface that is not connected to the circuitry.

The newly cited patent to King also does not anticipate claims 37, 53 and 56. The Examiner cites King as having an electrode 14, which is correct. Electrode 14 is a ring electrode that is surrounded by a ring of adhesive 16 that is protected by a foil cover 16a. The ring electrode 14 appears mounted to what is referred to as a top hat 14a for structural support. The foil cover 16a is mounted on the ring of adhesive 16.

Claim 37 requires a carrier. It is not clear which portion the Examiner would consider to be the carrier, in that ring 14 is mounted with top hat 14a which is mounted in electrode support member 12. In any case, ring 14 does appear to be an electrically contactable conductor surface that includes a connecting element 20/20a extending to the electrode ring 14.

However, the foil cover 16a, which in use is peeled away from adhesive 16, does not and cannot correspond to the claimed current-equalizing conductor surface. The Examiner characterizes the foil 16a as being conductive. However, there is no evidence to support this conclusion by the Examiner contained within the King patent. It would seem as likely, if not more likely, for the foil cover 16a to be a plastic foil, rather than a metal foil. In any case, there is no indication of conductivity, and thus the limitation clearly cannot be anticipated on this basis.

Nor is the foil 16a arranged on the carrier on which the at least one electrically contactable conductor surface is arranged. Rather, the foil 16a is provided on adhesive 16.

Noting independent claim 53, the method limitations thereof even further clearly define over King. The method requires equalizing the distribution of the current with the at least one

uncontacted conductor surface on the carrier. If the foil 16a of King is considered to be the at least one uncontacted conductor surface in accordance with the Examiner's rejection, it would have been removed prior to use in accordance with King. This is because it is simply a cover for the adhesive. Thus it would be incapable of carrying out this method step.

The Examiner rejected claim 29 as being either anticipated or obvious. The Examiner considered unclear as to which figure, if any, Applicant had drafted claim 29. Attention should be directed to, however, Fig. 4, for example. The Canadian patent clearly does not disclose or suggest this aspect. In any case, however, independent claim 37 defines over the Canadian patent without resort to the limitations of claim 29, now found in claim 49.

Claim 56, corresponding to claim 36, defines over the Canadian patent for the same reasons as claim 37. Nor can an intermediate configuration correspond to the claim, because whether or not the electrodes of the Canadian patent are hooked up, the connecting elements are still provided.

The combination of King and the Canadian patent does not resolve the fundamental problems with King or the Canadian patent in meeting the limitations of independent claims 37, 53 and 56. Thus from the above, it is respectfully submitted that the present invention as set forth in claims 37-56 clearly patentable defines over both King and the Canadian patent. Indication of such is respectfully requested.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance, and the Examiner is requested to pass the case to issue. If the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact Applicants' undersigned representative.

Respectfully submitted,

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